

REMARKS

Claims 2-8, 10-14, 17 and 19 remain in the application. Applicant asserts that no new matter has been added. Reconsideration of the Application is hereby requested.

Objections to the Claims

Claims 10-14 were objected to as depending from a cancelled base claim. Claims 10-14 have been amended to change their dependency to Claim 19. It is believed that this amendment has overcome the objection. Therefore, Applicant respectfully requests that it be withdrawn.

Claim Rejections

Rejections Under 35 U.S.C. § 102

Claim 19 was rejected under 35 U.S.C. § 102(b), as being anticipated by Chiarot et al. (US 5,721,864).

The Action asserts that Chiarot discloses the limitation of “if the speculative load was a misprediction, then invalidating the speculative load in the pipeline and executing the non-speculative load, otherwise executing the speculative load and invalidating the non-speculative load.” Citing FIG. 2, steps 205 & 206. (Applicant was unable to find a step 206 in Chiarot.) However, step 205 simply does not refer to the execution of a speculative load. Figure 2 shows only that if a desired cache line (Line M) is in the L2 cache, then it is transferred to the L1 cache. Column 4, lines 7-31 clearly show that at step 205 “[w]hen a processor 110 requests cache line M from L1 cache 130 and cache line M is not in L1 cache 130 (i.e., an L1 Miss occurs), the state machine searches for the missed line (Line M) in L2 cache 120 (step 205). If Line M is resident in L2 cache 120, the state machine fetches Line M from L2 cache 120 into L1 I-cache 130 (step 210).” If the Line M is not in the L2 cache, then the system waits until all unresolved branches

are resolved and then fetches the Line M from main memory. [Chiarot, col. 4, lines 13-31]

Chiarot completely fails to disclose any system, of the type recited in the independent claims, that loads *both* a non-speculative load and a speculative load into a pipeline and that invalidates the speculative load and executes the non-speculative load if the speculative load is a mis-predict. For this reason, it is believed that this rejection has been overcome and Applicant respectfully requests that it be withdrawn.

Rejections Under 35 U.S.C. § 103

Claims 2-6, 10-14 and 17 were rejected under 35 U.S.C. § 103(a), as being unpatentable over Chiarot in view of Au (US 5,548,795).

With respect to the §102 rejection, Applicant has demonstrated that Chiarot completely fails to teach the limitation, recited in both of the independent claims, of both a non-speculative load and a speculative load being loaded in a pipeline and the limitation in which, in the case of a mis-predict, the speculative load is invalidated and the non-speculative load is executed. Nothing in Au teaches these limitations either. For this reason, it is believed that this rejection has been overcome and Applicant respectfully requests that it be withdrawn.

Prior Art Made of Record

In addition to the remarks presented above, Applicant asserts that the remaining prior art made of record neither anticipates, nor renders obvious the claimed invention.

CONCLUSION

Applicant believes that the rejections have been overcome for the reasons recited above. Therefore, Applicant respectfully requests that all remaining claims be allowed and that a timely Notice of Allowance be issued.

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No addition fees are believed due. However, the Commissioner is hereby authorized to charge any additional fees that may be required, including any necessary extensions of time, which are hereby requested, to Deposit Account No. 55992.

05/09/2008

Date



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